



Gender-Responsive Education and Transformation in Early Childhood Education

The world is facing a learning crisis. Fewer than half of the world's primary-level students are meeting grade-level literacy and numeracy standards. In Africa, 87% of children are unable to read and understand a simple text¹. While the learning crisis is complex, quality early childhood education (ECE) can help make sure children lay the foundation for success in primary school.

In partnership with Three Stones International and Cambridge Education, Right To Play carried out GREAT-ECE, a pilot project running from 2022 to 2024 with the aim to improve the quality of ECE in Rwanda and Mozambique. The project was centred on assessing the adaptability, acceptability, and effectiveness of teacher training on gender-responsive play-based learning in ECE in

Rwanda and Mozambique, as well as the effects of gender-responsive play-based learning on the classroom environment and children's early learning and development.

The project was funded by the International Development Research Centre, Global Partnership for Education, and the LEGO Foundation as part of their Knowledge Innovation Exchange, which connects partner expertise to help countries build stronger education systems.

Intervention

The teacher training resources used in GREAT-ECE were adapted from a primary teacher development program created by Right To Play in 2018 as part of the Gender Responsive Education and Transformation (GREAT) project in Ghana, Rwanda, and Mozambique. The training resources were redesigned and contextualized for use in the ECE sector in Rwanda and Mozambique.

¹ [World Bank, 2022](#)

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This process involved an action research workshop. Teachers validated the training content and provided input on locally appropriate games and activities, including those that would accommodate children with special needs. In Rwanda, the Rwanda Education Board validated the training resources.

Teachers participating in the project were trained in play-based learning. Right To Play reinforced skills with shorter follow up training sessions. Teachers had the opportunity to participate in communities of practice (CoPs) led by Right To Play, where groups discussed challenges, reviewed concepts, and practiced lesson planning. After conducting classroom observations, Right To Play provided additional coaching.

Research Objectives



Generate evidence on how a gender-responsive play-based approach to ECE promotes pre-school children's early socio-emotional learning and school readiness and impacts parental engagement in children's learning in Rwanda and Mozambique.



Generate knowledge and evidence on how to adapt and scale positive impacts of gender-responsive play-based approaches into mainstream play-based learning nationally or in similar contexts.



Strengthen the capacity of teachers, school leaders, parents, caregivers, and other education actors to use or adapt gender-responsive play-based approaches in ECE.

Methodology

In this pilot study, researchers collected both qualitative and quantitative data. The study took place between September 2022 and July 2023 at 10 ECE centres in Ruhango District in Rwanda and at nine ECE centres in Namaacha District in Mozambique.

At the start of the project, education stakeholders participated in an action research workshop in order to determine which components of the GREAT curriculum to introduce in pre-primary school settings. The participants reviewed, contextualized, and adapted the primary school curriculum into a validated pre-primary teacher training package that would be piloted in selected schools.

Researchers conducted a randomized control trial in order to assess changes in the classroom environment and in early childhood learning and development. In intervention and control schools, a baseline evaluation (pre-test) took place in November 2022 in Rwanda and in March 2023 in Mozambique. An endline evaluation (post-test) took place in July 2023 in Rwanda and in September 2023 in Mozambique.

During implementation, researchers held Focus Group Discussions (FGDs) with ECE teachers and conducted in-depth interviews with school leaders to assess how the GREAT-ECE activities and curriculum were perceived and to identify best practices and challenges that emerged.

Because the study also aimed to explore how play-based learning impacts parent-child engagement, a random sample of parents from control and intervention schools participated in FGDs.

Measurement Tools

International Development Early Learning Assessment (IDELA)

IDELA is a global tool that measures early learning and development among children aged three and a half to six years, as well as the school and classroom environment. Table 1 gives an overview of child assessment domains and skills measured with IDELA. Table 2 outlines classroom environment domains.

Table 1: Core IDELA child assessment domains and skills

Emergent literacy and language	Emergent numeracy	Gross and fine motor development	Socio-emotional development
Print awareness	Measurement and comparison	Hopping on one foot	Peer relations
Expressive vocabulary	Classification and sorting	Copying a shape	Emotional awareness
Letter identification	Number identification	Drawing a human figure	Empathy
Emergent writing	Shape identification	Folding paper	Conflict resolution
Initial sound discrimination	One-to-one correspondence		Self-awareness
Listening comprehension	Simple operations		
	Simple problem solving		

Table 2: Core IDELA classroom environment domains

General resources	Literacy and numeracy environment	Interactions
General classroom resources	Literacy environment	Interactions in the classroom
Health and sanitation	Numeracy environment	
Schedule and lesson plans		

Focus Group Discussions and Interviews

Researchers conducted Focus Group Discussions (FGDs) with teachers and parents, as well as in-depth interviews with school leaders. Table 3 provides an overview of the themes discussed with each respondent group.

Table 3: Themes discussed during qualitative research

FGDs with ECE teachers
Relevance of training
Acquired skills
Implementation challenges
Inclusive of gender-responsive, play-based learning approaches
Required support
Scalability and sustainability
Interviews with school leaders
Awareness about training
Observed changes among ECE teachers
Opportunities and challenges surrounding gender-responsive, play-based learning approaches
Required support
Scalability and sustainability
FGDs with parents
Awareness about training
Changes in parental engagement
Changes in home environment
Changes in early learning and development

Sample

IDELA

Nineteen ECE schools were randomly assigned to intervention and control conditions. In Rwanda, 455 children (241 are girls) and 29 classrooms from 10 schools in Ruhango District were assessed and compared over time and across intervention and control groups. In Mozambique, 331 children (178 are girls) and 23 classrooms from nine schools in Namaacha District were assessed and compared over time and across intervention and control groups.

Focus Group Discussions and Interviews

Twenty-six ECE teachers (24 are female) participated in FGDs. Ten school leaders (all female) participated in in-depth interviews. Sixty-two parents (32 are female) from both intervention and control schools participated in separate FGDs.



Pre-primary students in Namaacha District play a counting game with bottle caps.

Key Findings: Children’s Socio-emotional Learning and School Readiness

Mozambique

Table 4 shows that in GREAT-ECE intervention schools in Mozambique, the total average IDELA score increased by 16.9% following the intervention. The average post-test score was 7.9% higher than the average post-test score in control schools.

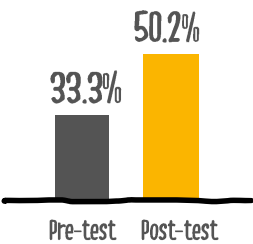


Table 4: IDELA total scores over time and across groups in Mozambique

	Average score IDELA total % (SD)	% change IDELA total pre-post	% difference IDELA total between groups at post-test	P-value interaction effects (Time*Group) ¹
<i>Intervention</i>			7.9%***	P<0.001
Pre-test	33.3% (15.5)	16.9%		
Male	32.1% (15.0)			
Female	34.7% (15.9)			
Post-test	50.2% (14.5)			
Male	49.2% (19.0)			
Female	51.3% (17.1)			
<i>Control</i>				
Pre-test	31.8% (15.0)	10.5%		
Male	30.9% (13.8)			
Female	32.9% (16.4)			
Post-test	42.3% (14.5)			
Male	41.2% (14.8)			
Female	43.4% (14.1)			
*** P<0.001; Calculated with a mixed repeated measures analysis of variance (ANOVA)				

As seen in Table 5, emergent literacy skills saw the steepest increase (18.9%) from pre to post-test. As a result of gender-responsive play-based learning, all subdomains saw a significant increase, except for motor development. This implies that the GREAT-ECE intervention had a positive impact on early learning and development outcomes for children in Mozambique.

Table 5: Scores on IDELA subdomains over time and across groups in Mozambique

	Emergent literacy (SD)	Emergent numeracy (SD)	Motor development (SD)	Socio-emotional development (SD)
Intervention				
Pre-test	20.8% (15.1)	10.8% (12.8)	48.5% (23.3)	46.6% (23.0)
Post-test	39.7% (21.7)	36.9% (22.0)	63.1% (19.5)	61.9% (22.4)
% change pre-post	18.9%	16.1%	14.6%	15.3%
Control				
Pre-test	19.1% (13.6)	19.2% (14.2)	46.0% (20.3)	43.9% (20.4)
Post-test	25.2% (14.1)	29.4% (17.7)	61.9% (19.4)	52.1% (21.4)
% change pre-post	6.1%	10.2%	15.9%	8.2%
P-value interaction effect (Time*Group) ¹	P<0.001	P<0.005	P=0.64	P=0.02
¹ Calculated with a mixed repeated measures analysis of variance (ANOVA)				

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Qualitative data reveals that parents in both intervention and control schools observed changes in their involvement with their child’s learning and development at home. But in the intervention group of parents, certain changes were reported more frequently or only in the intervention group.

Changes in parent engagement:

- Parents – including fathers – played with their children at home.
- Parents were more engaged in their child’s learning and saw themselves as collaborators.
- Parents communicated more regularly with teachers.

Changes parents observed in their child’s development:

- Child exhibited improved literacy skills.
- Child improved their ability to identify different shapes and sizes.

“I realized I need to dedicate more time for my son’s learning. I have also noticed the great progress made by his teachers and how I contribute to their efforts at home. So, it is important that we come here to participate in our children’s learning.”

— Mother, intervention school, Mozambique

Rwanda

Table 6 shows that in GREAT-ECE intervention schools in Rwanda, the IDELA total average score rose by 11.4% at post-test; however, a similar increase was observed in control schools.

Table 6: IDELA total scores over time and across groups in Rwanda

	IDELA total score % (SD)	% change IDELA total pre-post	% difference IDELA total between groups at post-test	P-value interaction effects (Time*Group) ¹
Intervention			1.4%	P=0.76
Pre-test	44.7% (11.1)	11.4%		
Male	44.1% (10.2)			
Female	45.3% (11.8)			
Post-test	56.1% (13.8)			
Male	56.5% (11.7)			
Female	58.4% (12.9)			
Control				
Pre-test	42.9% (12.3)	14.6%		
Male	42.7% (13.7)			
Female	43.0% (10.9)			
Post-test	57.5% (12.4)			
Male	55.0% (13.5)			
Female	57.1% (14.0)			

¹ Calculated with a mixed repeated measures analysis of variance (ANOVA)

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Table 7 shows that gender-responsive play-based learning did not have a significant impact on IDELA subdomains. These findings imply that the GREAT-ECE intervention did not significantly impact early learning and development outcomes for children in Rwanda.

Table 7: Scores on IDELA subdomains over time and across groups in Rwanda

	Emergent literacy (SD)	Emergent numeracy (SD)	Motor development (SD)	Socio-emotional development (SD)
Intervention				
Pre-test	29.8 % (11.3)	29.2% (12.1)	67.9% (15.4)	52.1% (17.1)
Post-test	44.2% (18.3)	43.7% (18.6)	79.0% (12.9)	64.1% (15.1)
% change pre-post	14.4%	14.5%	11.1%	12.0%
Control				
Pre-test	28.5% (13.4)	27.1% (13.1)	63.6% (16.8)	52.2% (18.2)
Post-test	40.8% (16.1)	42.8% (21.6)	77.6% (14.4)	62.2% (17.1)
% change pre-post	12.3%	15.7%	14.0%	10.0%
P-value interaction effect (Time*Group) ¹	P=0.21	P=0.40	P=0.11	P=0.25

¹ Calculated with a mixed repeated measures analysis of variance (ANOVA)

Qualitative data reveals that parents in both intervention and control schools observed changes in their involvement with their child’s learning and development at home. But in the intervention group, certain changes were reported more frequently or only in the intervention group.

Changes in parent engagement:

- Parents played with their children at home.
- Parents expressed motivation to attend school meetings.
- Parents were more engaged in their child’s learning.
- Parents communicated more regularly with teachers.

Changes parents observed in their child’s development:

- Child improved fine motor skills, like holding a pen correctly.
- Child practiced literacy exercises, like writing down letters.
- Child exhibited a greater sense of agency and responsibility.

“Before, I would see my child playing the fun games they played at school, and while my child wanted to play with me, I would often decline. However, I’ve since made a conscious effort to change that behavior. Now, I actively engage with her, play, and discuss what she’s learned from those games.”

— Father, intervention group, Rwanda

Key Findings: Classroom Environment

Mozambique

The scoring scale for assessing the classroom environment ranges from 1 (minimum) to 5 (maximum). As seen in Table 8, classroom environment domain and total scores in GREAT-ECE intervention schools improved from pre to post-test. The average increase at post-test was 0.9. All scores decreased in the control schools. Compared with teachers in control schools, teachers at intervention schools made more frequent use of a daily lesson plan that balanced numeracy and literacy activities.

“Before, I didn't know how to listen to the children's opinions. I thought that only educators should voice opinions. I learned that I have to give time for children to express themselves and for me to listen.”

—Female teacher, Mozambique

Table 8: IDELA classroom environment scores over time and across groups in Mozambique

	General resources (SD)	Literacy and numeracy environment (SD)	Interactions (SD)	Classroom total (SD)
Intervention				
Pre-test	4.1 (0.6)	3.4 (0.8)	4.3 (0.5)	3.7 (0.6)
Post-test	4.7 (0.4)	4.3 (0.7)	4.9 (0.1)	4.6 (0.4)
Mean difference pre-post	+0.6	+0.9	+0.6	+0.9
Control				
Pre-test	4.1 (0.7)	3.4 (0.9)	4.2 (0.5)	4.0 (0.7)
Post-test	3.5 (0.9)	4.1 (0.9)	3.9 (0.9)	3.5 (0.9)
Mean difference pre-post	-0.5	-0.3	-0.3	-0.5
P-value interaction effect (Time*Group) ¹	P<0.001	P<0.001	P<0.001	P<0.001

¹ Calculated with a mixed repeated measures analysis of variance (ANOVA)

The findings show that the GREAT-ECE intervention had a positive effect on the classroom environment in Mozambique. An improved classroom environment favourably influenced child development outcomes.

Qualitative results suggest that teachers and school leaders are responding well to the pre-primary training, activities, and curriculum. Teacher training and CoPs have clear benefits for teachers and students. Teachers described combining play-based approaches with more equal participation from girls and boys in the classroom and more positive meetings with parents. Teachers reported an increase in agency among their students and more frequently made changes in their lesson plans and teaching style to incorporate play. Time constraints and difficulty adapting activities for children with disabilities were among the challenges reported by teachers while using a play-based approach.

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Rwanda

Across both intervention and control groups, classroom environment scores improved over time across all domains, except for the general resources domain, where the score decreased in control schools. The improvements across domains were not significant, suggesting that the GREAT-ECE intervention did not have an impact on classroom environments in Rwanda.

Table 9: IDELA scores for classroom environment over time and across groups in Rwanda

	General resources (SD)	Literacy and numeracy environment (SD)	Interactions (SD)	Classroom total (SD)
Intervention				
Pre-test	3.2 (0.8)	3.5 (1.0)	4.3 (0.7)	3.7 (0.7)
Post-test	3.4 (1.1)	4.3 (0.8)	4.6 (0.5)	4.1 (0.7)
Mean difference pre-post	+0.2	+0.8	+0.3	+0.4
Control				
Pre-test	2.6 (0.6)	2.6 (0.6)	3.4 (1.0)	2.9 (0.4)
Post-test	2.2 (0.8)	2.9 (0.7)	3.9 (0.7)	3.2 (0.7)
Mean difference pre-post	-0.4	+0.3	+0.5	+0.3
P-value interaction effect (Time*Group) ¹	P=0.58	P=0.85	P=0.35	P=0.99

¹ Calculated with a mixed repeated measures analysis of variance (ANOVA)

Qualitative results suggest that teachers and school leaders are responding well to the pre-primary training, activities, and curriculum. Like in Mozambique, teachers in Rwanda started using gender-responsive play-based learning more frequently in their lesson plans. They interact more frequently and have deeper relationships with parents.

Teachers also made their classroom more attractive by hanging posters and making use of the outside space for playing.

Small classroom sizes, a lack of resources, and difficulty adapting activities for children with disabilities were among the challenges reported by teachers while using a play-based approach.

“The new teaching methods have resulted in children being calm and attentive due to their positive relationship with their teacher. Before, children would avoid the teacher or display fear, but now, they eagerly approach the teacher and even greet him with hugs.”

—School leader, Rwanda

Lessons Learned

A better understanding of national ECE policies is necessary to scale play-based learning. ECE policy landscapes in Rwanda and Mozambique vary significantly. Rwanda has a more developed understanding of ECE policy priorities, while Mozambique's frameworks are still evolving. This disparity made it challenging to engage policy stakeholders, especially in Mozambique, in discussions about integrating the positive impacts of GREAT-ECE into pre-primary curricula. A better understanding of the different ECE policy landscapes from the project's onset would enable more effective stakeholder engagement and a better understanding of how to scale the approach.

Recommendation: Future projects should include a needs assessment and closer analysis of both primary and pre-primary education policy landscapes and stakeholders, all with a focus on scaling.

More feedback loops with teachers are needed to enhance their ownership of the GREAT-ECE curriculum. Feedback from teachers and education stakeholders during the design phase of the GREAT-ECE curriculum was limited to one workshop. More action research feedback loops that allow teachers to share their play-based curriculum implementation experiences and needs will help create a more focused and relevant curriculum.

Recommendation: Future projects should include ongoing feedback mechanisms, like a WhatsApp group, to gather input from teachers and stakeholders that inform curriculum revisions.

The study should have included research on the cost-effectiveness of implementing a play-based approach. The study did not gather data on the cost associated with training teachers

and other intervention activities. This information is central to discussions on scaling up the approach in low-resource contexts.

Recommendation: Include a cost-effectiveness study in future research projects.

Teachers would have benefited from a longer training period: Gender-responsive, play-based learning had a limited impact on early learning outcomes in Rwanda. This could be attributed to a short project implementation period and teachers having only six months to learn and implement a new curriculum. More frequent coaching, mentoring, and a longer follow-up study could help teachers reinforce skills that strengthen quality learning for children.

Recommendation: Future projects that aim to measure changes in the performance of children should be longer in duration or include a more intensive training period.

A focus on playful parental engagement could further a child's success in school.

Qualitative data shows that parents became more involved with their children's learning as a result of the intervention. But the project's budget and time constraints meant Right To Play could not provide additional training for parents on ways to reinforce play-based learning at home. Because parents have such a significant impact on their child's attitude toward school, learning, and future success, this is an area that future projects should focus on.

Recommendation: Future projects should consider allocating more time to working with parents to reinforce play-based learning at home and strengthen ECE outcomes.

Conclusion

With the involvement of ECE teachers, a gender-responsive, play-based learning training manual and curriculum for primary teachers could be adapted for pre-primary education in Rwanda and Mozambique. Pre-primary teachers and school leaders indicated acceptance and enthusiasm for a gender-responsive, play-based learning approach. Parents became more involved in their children's schooling and success.

Play-based learning had a positive impact on classroom environments and early learning outcomes in Mozambique, particularly in literacy. But similar improvements were not observed in Rwanda. This discrepancy can be attributed to different school and classroom dynamics and variations in project implementation across the two countries.

Strengthening the capacity of teachers in inclusive play-based learning can be an effective way to support countries in their efforts to improve ECE. But more time must be dedicated to understanding what type of continuous teacher professional development training aligns best with the ECE contexts in which educators operate. Different contexts have distinct regulation processes, funding, resource needs, and policy landscapes. It is crucial to systematically build in regular feedback and engagement opportunities with teachers and policy makers and adapt the teacher training package based on their needs and context. Teachers have valuable knowledge and expertise on what works in their education sector. Their involvement in designing curriculum and teacher training packages can create inclusive environments where children learn their best and build skills to take on the world of tomorrow.



A student from a Right To Play-supported school involved in the GREAT project plays on an outdoor structure in Namaacha District, Mozambique.

Our Mission

To protect, educate, and empower children to rise above adversity using the power of play.



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PROTECT. EDUCATE. EMPOWER.

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